

## CLAIMS

Therefore, having thus described the invention, at least the following is claimed:

- 1           1.       A paperboard carton with two ends for carrying a plurality of  
2       containers, the carton comprising:  
3               (a)     a bottom panel, top panel and adjoining side panels attached to  
4       the top panel by fold lines, with each end of the carton being closed by a top end flap  
5       attached to the top panel by a fold line, a side end flap foldably attached to each side  
6       panel, a bottom end flap foldably attached to the bottom panel, with means for  
7       securing said flaps on each end of the carton in the closed position;  
8               (b)     said carton having a handle aperture in at least one top end flap  
9       for carrying the carton when loaded with containers with said flaps being secured in  
10      the closed position, with each side end flap on the same end of the carton as said top  
11      end flap having an aperture which is sufficiently aligned with the handle aperture in  
12      said top end flap so that a person's hand can be extended through the handle aperture  
13      in said top end flap and aligned apertures in side end flaps for carrying the loaded  
14      carton; and  
15              (c)     said carton having a paperboard insert which is secured by securing  
16      means to at least one of the (i) top end flaps and (ii) the side end flaps on each end of  
17      the carton having a handle aperture in said top end flap, said insert having an aperture  
18      that is sufficiently aligned with the handle aperture in said top end flap and apertures  
19      in said side end flaps so that a person's hand can be inserted through all aligned  
20      apertures to carry the carton when loaded with containers with both ends of the carton  
21      being secured in the closed position, said paperboard insert and said side end flaps  
22      reinforcing the top end flap with a handle aperture to preserve the integrity of said  
23      handle aperture when the carton is loaded with containers and being carried by a  
24      handle aperture in at least one of the top end flaps.

- 1           2.       The carton of claim 1 which has a handle aperture in each top end flap.  
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1           3.     The carton of claim 1 in which the means for securing the insert to the  
2     carton and the flaps together is glue.

1           4.     The carton of claim 1 in which the insert is secured by securing means  
2     to each side end flap on each end of the carton having a handle aperture in said top  
3     end flap.

1           5.     The carton of claim 1 in which the paperboard insert is secured by  
2     securing means to each top end flap having a handle aperture in said top end flap.  
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1           6.     The carton of claim 5 in which each top end flap has a handle aperture  
2     to which a paperboard insert is secured by securing means.

1           7.     The carton of claim 6 in which each top end flap has an inside and  
2     outside surface and the paperboard insert is secured to the inside surface of each top  
3     end flap.

1           8.     The carton of claim 7 in which each insert has an aperture larger than  
2     the corresponding handle aperture in the top end flap to which the insert is secured.

1           9.     The carton of claim 8 which has interconnected tear lines in the top  
2     panel which extend into at least one side panel to form a dispenser flap which when  
3     torn open allows the removal of containers from the carton.

1           10.    The carton of claim 9 in which the interconnected tear lines extend into  
2     each side panel and are interconnected in said top panel to form two dispenser flaps.

1           11.    The carton of claim 10 in which a finger flap is formed by a tear line  
2     adjacent to a location in the interconnected tear lines that forms two flaps so that  
3     when the finger flap is opened the interconnected tear lines can be torn opening either  
4     or both dispenser flaps so containers can be removed from the carton.

1           12.    The carton of claim 6 in which the insert also extends across the top  
2           panel from one top end flap to the other top end flap.

1           13.    The carton of claim 12 in which the insert has apertures larger than the  
2           corresponding handle aperture in each top end flap.

1           14.    The carton of claim 13 in which the insert has a fold line that is  
2           adjacent to the fold line between the top panel and each top end flap with each fold  
3           line in said insert being interspersed with a plurality of apertures along the fold line to  
4           facilitate closing and securing the top end flaps on each end of the carton together.

1           15.    The carton of claim 14 in which each top end flap and the top panel  
2           has an inside and outside surface and the insert is secured to the inside surfaces of the  
3           top panel and the top end flaps by glue.

1           16.    The carton of claim 15 which has interconnected tear lines in the top  
2           panel for forming at least one dispenser flap for removing containers from the carton  
3           when the flap is opened with the insert having corresponding interconnected tear lines  
4           that are located adjacent the interconnected tear lines in the top panel for forming an  
5           adjacent flap that can be opened with the dispenser flap in the top panel.

1           17.    The carton of claim 14 which has interconnected tear lines in the top panel for  
2           forming two dispenser flaps for removing containers from the carton when a dispenser  
3           flap is opened with the insert having corresponding interconnected tear lines that are  
4           located adjacent to the interconnected tear lines in the top panel for forming flaps  
5           which are adjacent to the dispenser flaps in the top panel, with the adjacent flap in the  
6           insert opening when a dispenser flap in the top panel is opened.

1           18.    The carton of claim 17 which has a finger flap formed by a tear line in  
2           the top panel adjacent the interconnected tear lines and a corresponding opening in the  
3           insert that is at least as large as the finger flap in the top panel.

1           19.     The carton of claim 18 in which the insert has a plurality of subsidiary  
2     tear lines parallel to at least a substantial portion of the interconnected tear lines in the  
3     insert so that the combination of the interconnected tear lines and subsidiary tear lines  
4     are located in relation to the dispenser flaps in the top panel so as not to impede the  
5     opening of a flap in the insert when the adjacent dispenser flap in the top panel is  
6     opened.

1           20.     The carton of claim 18 in which the insert has a plurality of subsidiary  
2     tear lines located parallel to a substantial portion of the interconnected tear lines in the  
3     insert so as to permit the tearing of the flap in the insert so that it is capable of being  
4     torn open and extended inside the opening formed by tearing and opening the adjacent  
5     dispenser flap in the top panel, said subsidiary tear lines being located so as to  
6     compensate for any slight misalignment when the insert is located and secured to the  
7     top panel.

1           21.     A paperboard carton with two ends for carrying a plurality of  
2     containers, the carton comprising:

3                 (a)     a bottom panel, top panel and adjoining side panels attached to  
4     the top panel by fold lines, each end of the carton being closed by a top end flap  
5     attached to the top panel by a fold line, a side end flap foldably attached to each side  
6     panel, a bottom end flap foldably attached to the bottom panel with means for  
7     securing said flaps on each end of the carton in the closed position;

8                 (b)     said carton having a handle aperture in at least one top end flap  
9     for carrying the carton when loaded with containers with said flaps being secured in  
10    the closed position, with each side end flap on the same end of the carton as said top  
11    end flap having an aperture which is sufficiently aligned with the handle aperture in  
12    said top end flap so that a person's hand can be extended through the handle aperture  
13    in said top end flap and aligned apertures in said side end flaps; and

14                (c)     said carton having a paperboard insert which is secured by  
15    securing means to the top panel and at least one top end flap, said insert having an  
16    aperture that is sufficiently aligned with any handle aperture in a top end flap and  
17    apertures in the side end flaps on the same end of the carton so that a person's hand  
18    can be inserted through all aligned apertures to carry the carton when loaded with  
19    containers with both ends of the carton being secured in the closed position, said

20 paperboard insert and said side end flaps reinforcing the top end flap with a handle  
21 aperture to preserve the integrity of said handle aperture when the carton loaded with  
22 containers is being carried by a handle aperture in at least one of the top end flaps.

1 22. The carton of claim 21 which has a handle aperture in each top end  
2 flap.

1 23. The carton of claim 22 in which the top end flaps and top panel have  
2 an inside and outside surface with the insert being secured to the inside surface of the  
3 top panel and the top end flaps.

1 24. The carton of claim 23 in which each aperture in the insert is slightly  
2 larger than the handle aperture in the top end flap on the same end of the carton in  
3 order to compensate for any imprecision in the alignment of the insert when being  
4 located and secured to the top panel and top end flaps.

1 25. The carton of claim 24 in which the means for securing the insert to the  
2 top panel and top end flaps and the means for securing the flaps on each end of the  
3 carton together is glue.

1 26. The carton of claim 25 in which the insert has a fold line that is  
2 adjacent to the fold line between the top panel and each top end flap, with each fold  
3 line in said insert being interspersed with a plurality of apertures along the fold line to  
4 facilitate closing the top end flaps and gluing the flaps on each end of the carton  
5 together.

1 27. The carton of claim 25 in which the top panel has tear lines for forming  
2 at least one dispenser flap with the insert having adjacent tear lines for forming a flap  
3 adjacent to the dispenser flap in the top panel so that when the dispenser flap and  
4 adjacent flap in the insert are opened an opening is formed for removing containers  
5 from the carton.

1           28.    The carton of claim 27 in which there is a plurality of subsidiary tear  
2    lines parallel to and spaced close to said corresponding tear lines in the insert and  
3    located along a substantial portion of said tear lines, said tear lines and subsidiary tear  
4    lines being spaced and located so that the adjacent flap in the insert can be opened  
5    along with the dispenser flap in the top panel with the flap in the insert opening into  
6    the opening formed by opening the dispenser flap in the top panel, said tear lines and  
7    subsidiary tear lines permitting the dispenser flap and adjacent flap in the insert to be  
8    easily opened even though the insert has been secured to the top panel in a slightly  
9    imprecise location.

1           29.    The carton of claim 28 in which a finger flap is formed in the top panel  
2    adjacent the tear lines forming the dispenser flap, said finger flap being formed by a  
3    tear line, said insert having an aperture in a location corresponding to the finger flap,  
4    said aperture being slightly larger than the finger flap so that any slight imprecision in  
5    securing the insert to the top panel does not interfere with a person's finger pushing  
6    the finger flap into the aperture in the insert to commence opening the dispenser flap  
7    and adjacent flap in the insert.

1           30.    The carton of claim 28 which has twin dispenser flaps in the top panel  
2    in which a portion of the tear lines forming each flap is shared in common with a  
3    portion of the tear lines forming the other dispenser flap and the insert has twin flaps  
4    adjacent to the twin dispenser flaps in the top panel, with a portion of the tear lines  
5    forming each flap in the insert being shared with a portion of the tear lines forming  
6    the other flap in the insert.

1           31.    The carton of claim 30 in which at least a substantial portion of the tear  
2    lines forming each flap in the insert that is shared in common with the tear lines  
3    forming the other flap in the insert has subsidiary tear lines parallel to and spaced  
4    close to said tear lines to facilitate the easy opening of either dispenser flap and  
5    adjacent flap in the insert.

1           32.    The carton of claim 31 in which the portion of the tear lines in the top  
2    panel shared in common, and the portion of the tear lines in the insert shared in  
3    common are at least substantially perpendicular to each end of the carton.

1           33.     The carton of claim 32 in which the finger flap in the top panel is  
2     adjacent the portion of the tear lines shared in common.

1           34.     A paperboard carton with two ends for carrying a plurality of  
2     containers, the carton comprising:

3                 (a)     a bottom panel, top panel and adjoining side panels attached to  
4     the top panel by fold lines, each end of the carton being closed by a top end flap  
5     attached to the top panel by a fold line, a side end flap foldably attached to each side  
6     panel, a bottom end flap foldably attached to the bottom panel, said flaps being  
7     secured together in the closed position by glue;

8                 (b)     said carton having a handle aperture in each top end flap for  
9     carrying the carton when loaded with containers with said flaps being secured in the  
10    closed position, with each side end flap on the same end of the carton as said top end  
11    flap having an aperture which is sufficiently aligned with the handle aperture in said  
12    top end flap so that a person's hand can be extended through the handle aperture in  
13    said top end flap and aligned apertures in said side end flaps; and

14                (c)     said top panel and top end flaps having an inside and outside  
15    surface, said carton having a paperboard insert which is secured to the inside surface  
16    of the top panel and each top end panel by glue, said insert having an aperture that is  
17    adjacent to, but is slightly larger than the handle aperture in each top end flap, said  
18    insert having a fold line that is adjacent to the fold line between the top panel and  
19    each top end flap, with each fold line in said insert being interspersed with a plurality  
20    of apertures along the fold line to facilitate closing the top end flaps and gluing the  
21    flaps on each end of the carton together, and

22                (d)     said top panel having twin dispenser flaps formed by a  
23    common tear line with two ends which is at least substantially perpendicular to the top  
24    end flaps, with a finger flap formed by a tear line along said common tear line, with  
25    each dispenser flap being defined by a tear line near each top end flap that extends  
26    from an end of the common tear line diagonally for a distance towards the nearest end  
27    flap and then turns towards the nearest side panel, with the fold line between the side  
28    panel and top panel forming a hinge to facilitate opening the dispenser flap, said insert  
29    having corresponding tear lines and an aperture aligned with the finger flap in the top  
30    panel but slightly larger in size.

1           35.    The carton of claim 34 in which the corresponding common tear line in  
2    the insert has subsidiary parallel tear lines spaced close to the common tear line and  
3    each corresponding tear line in the insert that extends towards a side panel has  
4    subsidiary parallel tear lines, said subsidiary tear lines in the insert facilitating the  
5    opening of each flap in the insert when the adjacent dispenser flap is being opened by  
6    compensating for any imprecision in locating and securing the insert to the top panel.